ABSTRACT OF THE DISCLOSURE

A fuel cell system, comprising: a fuel cell for producing electrical energy; a load driven by the fuel cell; a first reactant supply line for supplying a first reactant to the fuel cell; a second reactant supply line for supplying a second reactant to the fuel cell; a first reactant buffer for storing first reactant and supplying an additional amount of first reactant to the fuel cell in response to an increase in a measured characteristic; a first flow regulating device that regulating the amount of the first reactant supplied from the first reactant buffer to the fuel cell; and a controller for controlling the first flow regulating device in response to the measured characteristic.